



# ONLOCATION

Profit from our information.

Issue 02 ■ April 2005

## The ISO PPC™ Program

Helping communities improve their fire protection



The ISO Class One ribbon adorns the official shield on all City of Las Vegas Department of Fire and Rescue apparatus.

*"ISO's PPC™ program is a successful partnership between insurers and local governments to help communities plan, budget, and justify investments that improve municipal fire protection," says Bill Raichle, ISO assistant vice president. "The link between effective public fire-mitigation capabilities and lower insured property loss is unquestioned, and the widespread support for the PPC program by insurers and municipal officials is unparalleled."*

ISO conducts detailed on-site assessments of municipal fire-protection capabilities and collects information for more than 45,000 fire districts across the United States. We analyze the relevant data and assign a Public Protection Classification (PPC) from 1 to 10. Class 1 represents exemplary public protection, and Class 10 indicates that the area's fire-suppression program doesn't meet minimum criteria.

### How does ISO determine PPC?

A community's PPC depends on its fire department, water supply, and fire alarm and communications systems.

#### Fire department

Fifty percent of the overall grading is focused on a fire department's first-alarm response and initial attack to minimize potential loss. We review the distribution of fire stations and fire companies,

## welcome

to the April 2005 issue of *OnLocation*. This issue is all about ISO's Public Protection Classification (PPC™) program — which helps insurers measure and evaluate the effectiveness of fire-mitigation services in communities around the country. Fire is the largest single cause of property loss paid by insurers — now totaling more than \$15.5 billion each year. A strong correlation exists between effective fire protection and lower losses, and no other program influences community investment in loss-mitigation initiatives as effectively as PPC.

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equipment carried, pumping capacity, reserve apparatus, department personnel, and training.

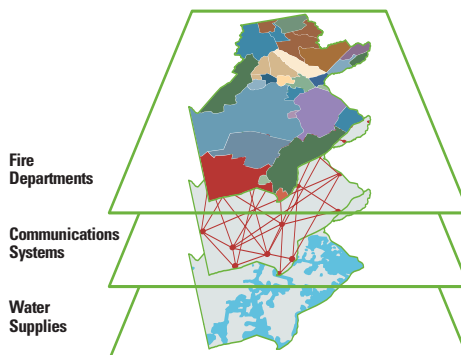
#### Water supply

Forty percent of the overall grading is based on the community's water supply. We review the condition and maintenance of hydrants, and we evaluate the available water supply against the amount needed to suppress fires. We assess all components of the water-supply system, including pumps, storage, and filtration, and even observe fire-flow tests at various community locations to determine the rate of flow the water mains provide.

#### Fire alarm and communications systems

Ten percent of the overall grading is based on how the fire department receives and dispatches fire alarms. We evaluate telephone lines and systems, staffing, and dispatching systems.

*(continued on page 2)*



## The ISO PPC Program *(continued from page 1)*

### What does PPC mean to you?

Virtually all U.S. insurers of home and business property use ISO's PPC in assessing property policies. That's because statistical data on insurance losses demonstrates the relationship between better fire protection — as measured by the PPC program — and lower fire losses.

### LOCATION® PPC: Best source for accurate PPC assignment

By using correct PPC codes, you can implement your underwriting and rating plans as designed — potentially increasing your total premiums and improving your loss ratio. LOCATION® PPC delivers up-to-date PPC information representing every

address in the United States. LOCATION assesses detailed information on fire-district boundaries, distances to responding fire stations, automatic-aid agreements, and water sources, including hydrants, suction points, and hauled water.

And when conditions in a community change and we give the fire district a new PPC code, you can use the LOCATION Future Effective PPC File to alert you — up to three months in advance — to fire districts that will experience a PPC change. You'll also get the effective date for the new PPC grading so you can start using the data for new policies or renewals occurring on or after the publication date. ■



*Good communications, well-trained and equipped firefighters, and an adequate water supply can help reduce fire loss.*

### What insurers say about PPC...

*"Information about public protection is basic to property underwriting. The PPC is an indication of the firefighting response we expect to have from a community. The way we use the protection class goes beyond the rates we charge. It also directly affects the decision to accept or reject more hazardous exposures and the amount of capacity we're willing to allocate. PPC plays a very important role in our underwriting process."*

Peggy Kreger  
Vice President, Commercial Lines  
Safeco

*"Over the last several years, we've redoubled our efforts to assign the correct PPC to every risk. By doing that, we've achieved substantial improvements in the profitability of our property insurance business. We are aggressively writing new policies and identifying areas with improving fire protection. We immediately communicate this information to our agents so that we can target our marketing efforts in areas that have upgraded their fire service or added water supply."*

Deborah R. Settle, CPCU  
Vice President, Fire Product Management  
Farmers Insurance Group, Inc.

### The most widely used products in the property insurance industry

The insurer groups that participate in ISO's PPC™ program insure more than 95 percent of all insured properties in the United States, a participation rate that sends a strong signal of support for fire officials throughout the country.

Companies that write more than half of all homeowners insurance in the United States have used LOCATION® PPC or its predecessor product, the Geographic Underwriting System (GUS®), to assign PPC codes to individual risks.

## Statistics tell the story

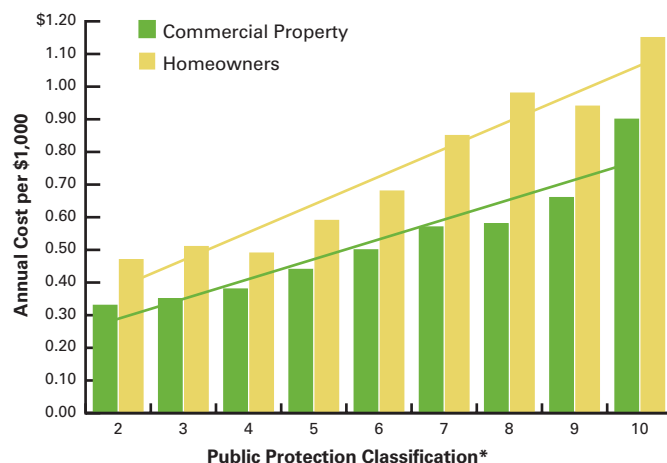
### The better the class, the better the loss experience

Many fire departments provide only marginal or inadequate protection against structure fires. Of almost 46,000 fire districts evaluated under the PPC™ program, some 14,000 (about 30 percent) have achieved only a Class 9 rating — the lowest recognized protection. More than 1,300 (or 3 percent) have the Class 10 rating — no recognized protection. What do those ratings mean for fire losses?

ISO statistics show that, per \$1,000 of insured property, communities with the worst PPC ratings have fire losses two or more times as high as communities with the best PPC ratings.

Although many of the Class 9 and Class 10 fire departments serve small and rural communities, they are responsible for protecting more than an estimated 20 million people and billions of dollars of residential, business, and public properties. ■

### Cost of Fire Claims per \$1,000 of Insured Property



\*Because there are only about 45 Class 1 fire districts in the U.S., the data sample is not statistically credible.

# Knowing locations of fire stations just isn't enough

Knowing the distance from a nearby fire station to your insured property is frequently meaningless for assessing potential loss and assigning a PPC™. That's because the "nearest fire station" may not meet minimum national standards for initiating a response to a structure fire, or operate 24x7x365, or even be the responding fire station for that specific property address.

ISO can cut through such confusion and identify *recognized* fire stations that will actually respond to a fire at each of your risks.

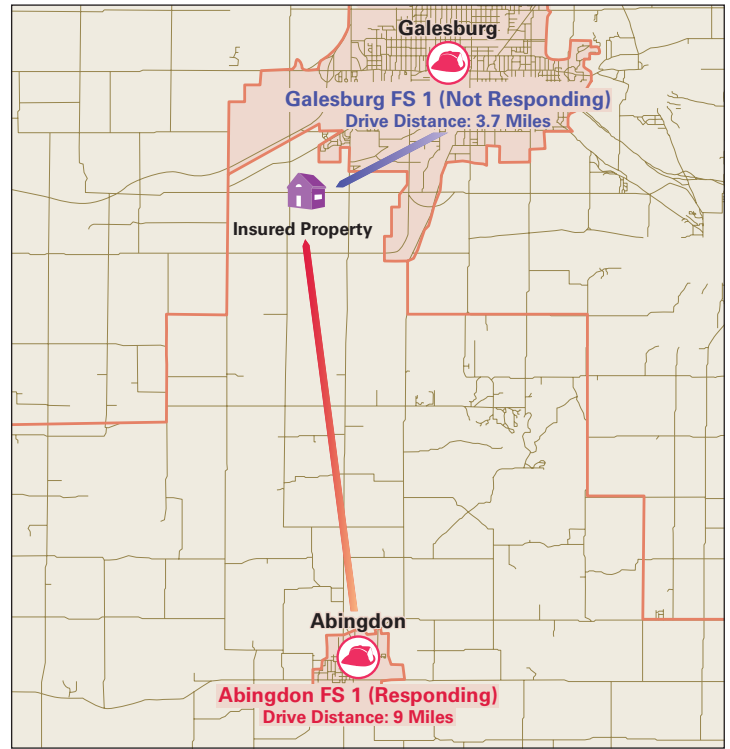
## Consistent assessment against national standards

ISO uses the national standards set forth in its Fire Suppression Rating Schedule (FSRS) to assess all fire stations and determine which ones meet minimum standards. ISO doesn't recognize fire stations that:

- lack sufficient personnel, apparatus, equipment, or training to initiate an attack on a structure fire
- are seasonal or used for an exclusive purpose, such as wildland firefighting
- aren't fully operational
- are private collections — and not for firefighting

## It's more than just distance

Publicly available data about fire stations — from sources such as the Yellow Pages and county address lists — doesn't meet insurers' needs. What's more, the nearest fire station isn't always the *responding* station. In fact, the first responding fire company may come from outside the risk's own fire district because of an automatic-aid agreement between districts. You need information about effective response, accurate location of fire stations, and changes in fire station locations.



Although the insured property is less than four miles from a fire station, the **responding** fire station is nine miles away. Only LOCATION has countrywide information about the nearest recognized and responding fire stations.

LOCATION® PPC provides information on distances to responding fire stations — including fire stations that:

- respond to residential fires 24x7x365
- meet recognized performance standards for fighting a residential fire
- will respond to a specific risk address on a first-alarm basis
- may offer residential service by voluntary subscription ■



Only one of these fire stations can effectively initiate a response to a structure fire. Can you figure out which one? To find the answer, go to [onlocation.iso.com](http://onlocation.iso.com) and follow the link for GeoTrivia.

# Independent study shows that fire chiefs use PPC™ to help plan improvements

Many parts of our country are experiencing extraordinary residential and commercial growth. But growth can strain municipal resources. New construction, increasing population, and expanding economic activity place demands on a wide variety of municipal services — including fire protection.

A survey of 500 randomly selected fire chiefs and other officials conducted for ISO by the independent polling firm Opinion Research Corporation examines the extent to which growth threatens the effectiveness of public fire protection in the United States. The study also looks at some of the ways communities are working to keep pace with growth and improve protection for their citizens.

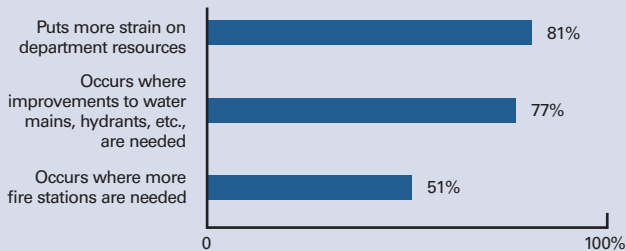
Survey results also indicate that community officials plan to make a significant number of improvements during the next three years — changes that may have a substantial impact on insurance premiums.

According to the survey:

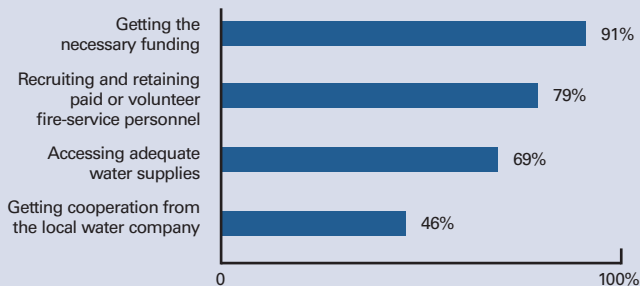
- 29 percent of respondents plan to open one or more new fire stations.
- 32 percent plan to adjust the response areas of one or more fire stations.
- 32 percent plan to add hauled-water operations.
- 43 percent plan to enter into new automatic-aid agreements for fire protection with one or more communities. Those agreements fill a coverage void in a fire department's current fire-suppression services by ensuring that firefighters respond from a closer fire station to the properties at risk.
- 65 percent plan to upgrade their communications infrastructure.
- 71 percent plan to extend water systems and install hydrants.
- 76 percent plan to increase training requirements for firefighters.

## What the fire chiefs said...

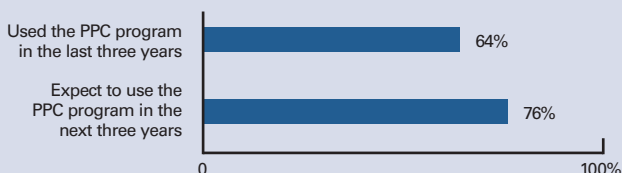
### Where growth is expected in the next three years, its impact on fire-mitigation resources will be substantial...



### There are real obstacles to making improvements...



### And ISO's PPC program helps communities plan for, budget, and justify improvements...



Source: Opinion Research Corporation

*"I've spent most of my adult life analyzing the key components of good fire protection, and I can tell you this — I can't imagine living in a world without ISO's Public Protection Classification program. It works because the financial incentives to improve classifications are unique and effective. It works because insurers and residents alike benefit from the informed choices of community leaders. And it works because saving lives and property continues to be the prime mission of local emergency responders."*

Dr. Harry E. Hickey  
Retired Professor,  
Fire Protection Engineering  
University of Maryland

### When growing communities work to maintain or improve their Public Protection Classifications, everyone benefits

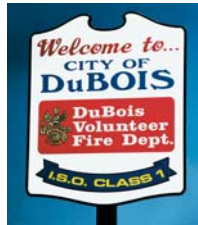
Residential and commercial growth, new construction materials and techniques, and community annexations of outlying areas — all those developments challenge fire departments across the country.

Fire chiefs and community officials rely on ISO as an objective source of information and support. They know that ISO's PPC program provides economic incentives that can help growing communities justify necessary expenditures on fire service.

Insurers rely on PPC to assess and manage risk. Because the program encourages communities to maintain and improve their public protection, insurers benefit from reduced losses. ■

*To read more details from the ORC study, go to [onlocation.iso.com](http://onlocation.iso.com) and follow the link for "Effective Fire Protection."*

The findings cited in this article are from a survey conducted in July 2003 by Opinion Research Corporation of fire chiefs and other officials from randomly sampled communities around the country.



### What the fire chiefs say about PPC...

*"During our recent PPC grading, the fire department, the Texas Department of Insurance, and ISO worked closely together to ensure that we got the maximum credit for installation of fire sprinkler systems in numerous local businesses. We've increased the frequency of inspection, and we're making sure the related documentation is up to date. As a result, El Paso's PPC improved to Class 1, and many businessowners and homeowners should see reduced insurance premiums."*

Fire Chief Roberto Rivera  
City of El Paso, Texas

*"In Myrtle Beach, we've made a commitment to excellence in the level of our fire protection. That means keeping pace with rapid growth in our community. We've already identified areas where more protection is needed. ISO helped us pinpoint how these investments should help reduce insurance costs. Because of the insurance savings, the improvements will pay for themselves. Everybody wins — the fire department, the businessowners, and the residents."*

Fire Chief Alvin Payne  
Myrtle Beach, South Carolina

## Assigning PPC™ codes with LOCATION®-based system gets it right the first time

For almost eight years, ISO has conducted studies on behalf of many Top 100 insurers to evaluate the benefits of using a location-based system to assign Public Protection Classification (PPC™) codes. Combined, the companies we've studied account for more than half of all homeowners written premium within the United States. Results vary widely by insurer, but the average error rate in PPC assignment is about 25 percent, and the majority of errors result in underpricing.

### Manual PPC assignment

Determining PPC codes using manuals, maps, ZIP Codes, and local experience is labor-intensive and time-consuming and typically leads to inaccuracies that result in lost premiums and market-conduct fines. The difficulty in making accurate PPC assignments across a large book of business is due to several complexities:

- Fire districts often follow no distinct community, political, or postal boundaries.
- Cities often contain multiple fire districts with varying PPC codes.

- There is a wide variance in rules governing PPC classifications from state to state.
- Many states have separate rules for dwelling and commercial buildings and for tax-based and subscription fire services.
- Many risks are located in areas where a neighboring district's fire department responds as part of an automatic-aid agreement or are located in completely unprotected areas.

### Automated PPC assignment with LOCATION® PPC Service

With LOCATION® PPC Service, you'll:

- increase premium revenue for under-classed risks — ISO's studies have indicated that underpricing is far more prevalent than overpricing.
- enhance market competitiveness — Overpricing adversely affects competitive position for securing new business and ensuring renewal retention.

- maintain up-to-date classifications on current business — Many misclassifications are older classifications assigned for risks in areas that ISO has reclassified in recent years.
- improve performance on market-conduct examinations
- reduce system development and maintenance costs ■

### Facts about PPC errors...

- More than 70 percent of PPC errors result from assigning policies to the wrong fire districts.
- Almost 5 percent of errors occur because of an incorrect assessment of the drive distance to the nearest responding fire station.
- The PPC error rate for policies in force for more than three years is almost twice as high as new-business errors. (PPC codes change over time, and insurers are not always picking up the changes.)

# ISO's Community Outreach Program

*ISO identifies more than 1,000 geographic and boundary changes affecting PPC™ every month*

Monitoring about 46,000 fire protection areas in the United States. Deploying a staff of more than 100 dedicated community mitigation field representatives and 600 property field representatives located strategically around the country. Contacting officials representing about 2,000 fire protection areas by phone and mail every month. Conducting thousands of on-site community gradings each year. Getting more than 39,000 responses to date since program inception. Those numbers indicate the scope and success of ISO's Community Outreach Program.



*An ISO field representative visits a community to reevaluate its firefighting capabilities. More than half the communities ISO reevaluates in any year receive better Public Protection Classifications.*

ISO's Community Outreach Program — aggressively supported by many state and local fire associations — is our way

of identifying communities that have made changes that may affect their PPC™ gradings or the grades assigned to individual homes and commercial properties. In 2004, we completed gradings for more than 3,200 communities. Of those communities, 64 percent improved their PPC class, 34 percent retained their class, and 2 percent regressed in class.

In the past 12 months, we've also identified more than 2,800 fire station location changes that could affect premiums. And we've identified 9,500 changes to protection-area boundaries and automatic-aid-agreement areas. Those changes can affect the distance from a risk to the nearest responding fire station.

About every two years, ISO contacts community officials by phone and mail. We send the officials detailed questionnaires, including maps of their fire jurisdictions. Upon receiving a community's returned questionnaire, ISO performs an analysis to determine whether the community has made significant changes in its fire-suppression system. Based on that review of the changes, ISO may ask to conduct a survey and update the PPC.

Examples of significant changes include annexations or changes in the boundaries of a fire district, new or closed fire stations, water-system improvements, or changes in the way the community receives and handles fire alarms.



*ISO's highly trained staff of field representatives is located throughout the country.*

Although such changes may not directly affect the classification, they may change which properties receive the benefit of the classification.

If ISO determines that a new grading assessment could result in a PPC change, we contact the appropriate officials to schedule an on-site survey.

ISO has the highest-quality public protection information available because we collect data directly from local fire authorities, city managers, and other community officials. ISO staff gathers data in the field to map fire protection areas, water coverage areas, and fire station locations. As a result, LOCATION® PPC has become the industry standard for assigning PPC to individual risks. ■

**Visit ISO Mitigation Online at [www.isomitigation.com](http://www.isomitigation.com) — your source for up-to-date information on community efforts to mitigate the risk of losses from fire and natural hazards.**

## FireLine™ expands into more Western states

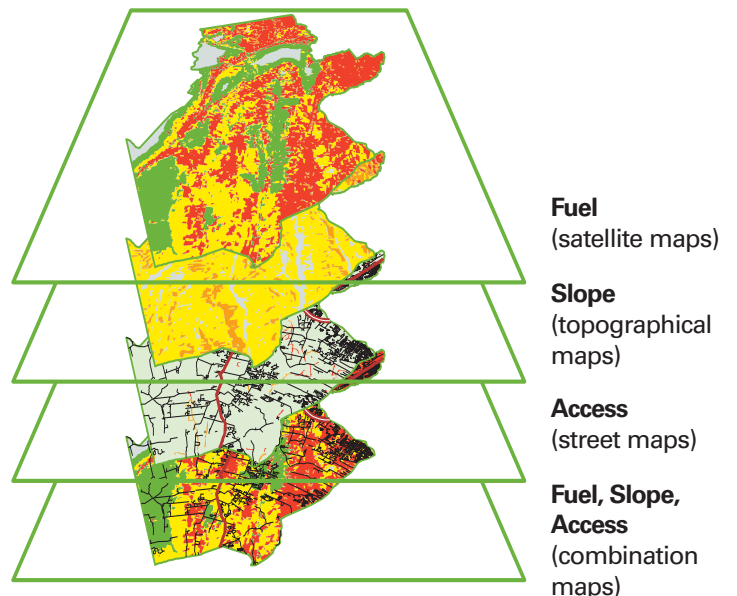
Now available in:

- Arizona
- California
- Colorado
- Idaho
- Nevada
- New Mexico
- Oregon
- Utah
- Washington

FireLine™ uses a combination of detailed satellite imagery, topographical maps, and street maps to determine a risk's exposure to wildfire hazards. You get information on three key wildfire risk factors — fuel, slope, and road access — as well as an overall hazard rating for each address.

Here's how FireLine helps insurers manage wildfire risks:

- Satellite images determine how much and what type of vegetation (fuel) is at a given location.
- Digital topographical maps show an area's slope — an indicator of how quickly a fire may spread.
- Street maps show how accessible a property or area is to firefighters. ■



### Allstate Insurance makes better underwriting decisions with LOCATION® services



Larry Long is a territorial risk consultant for Allstate Insurance Company. As a Texas commercial lines underwriter at Allstate's Independent Regional Commercial Center in Atlanta, Larry and the other underwriters in his division have used various LOCATION® services for several years now. "My most frequent use of LOCATION is with the PPC™ Service, followed by Crime and Wind

Services," Larry says. "PPC Service is a tremendous tool. The service helps us a great deal in Texas, since many of our agents are not familiar with ISO and don't understand the nuances of how to determine protection class. This is especially true when the risk is outside the city limits or in Metro Houston — where there are several different classes," Larry continues.

Larry also finds Wind Services very helpful. Allstate uses those services frequently in Florida and other coastal areas. "Wind Services are particularly useful in coastal areas since our guidelines are based on distances to bodies of water and whether the risk is located in a windpool-eligible area. We enter the risk address into LOCATION, and bam — we know exactly what we have and what underwriting direction we need to take," Larry emphasizes.

### Companion P&C builds online quote application with PPC™, Premium Tax, and Wind Services



Helmut Tissler is director of e-commerce for Companion P&C and is responsible for the development and operation of their websites, including internal and external web-based applications. Companion uses several LOCATION® services — PPC™ (in Florida), Premium Tax (in Florida), and Wind (windpool eligibility in South Carolina and Florida).

The company has also licensed

ISO's LOCATION API software to retrieve all the data from LOCATION databases.

"Our agents use the Companion website to enter, rate, quote, and issue homeowners policies online. Integrating LOCATION data streamlines those processes," Helmut notes. LOCATION is embedded in the website's data-entry process, so agents enter data into the applicable fields, and the system uses LOCATION to validate the entered data. If the system finds a difference, it corrects the agent's entry with the right LOCATION data and advises the agent of the correction with an on-screen message.

"LOCATION allows us to validate the data that agents enter, and this ensures that we're receiving correct PPC codes, windpool classifications, and premium-tax territories. These types of data are critical for both internal and external reporting purposes," Helmut says.

"An important part of Companion's business strategy is the ability for agents to rate, quote, and issue policies through our web-based applications," Helmut continues. "We want to enable

agents to complete the business transaction at the point of sale in as many cases as possible. Our old system — when agents submitted paper applications — meant that we had to validate and potentially correct the data after it arrived at our office. Now, with our web-based LOCATION application, we're ensuring that data is correct at the point of entry."

Helmut also emphasizes that the ISO technical staff was very easy to work with and proactive in ensuring that the Companion implementation went smoothly. "Once we were ready to begin the process, ISO worked quickly to integrate LOCATION with our web application, test it, and get it up and running for our agency users," Helmut says. ■

## GeoTRIVIA

As a LOCATION® user, you work with geographic data all the time. Test your knowledge with our GeoTrivia quiz. To find the answers, go to [onlocation.iso.com](http://onlocation.iso.com) and follow the link for GeoTrivia. Good luck!

1. How is it possible that properties on the same street can have significantly different Public Protection Classifications?
2. How can a property closer to a fire hydrant have a worse PPC™ than a property farther away from a hydrant?
3. How many ZIP Codes have at least five possible PPC code combinations?
4. How can LOCATION contain more addresses than the U.S. Postal Service and commercial GIS roadbases combined?

## Coming to a LOCATION near you

**Attend our free seminar:**  
**"Optimizing Your Property Portfolio Results with Location-Specific Information"**

This May, ISO is hosting a regional seminar for insurers to discuss ways you can improve the profitability of your property portfolio with accurate location-specific information. You'll get an overview of geographic information systems (GIS) technology and details on ISO's PPC™ initiatives. And you'll learn how insurers are using GIS to assess natural catastrophe exposures, crime, territory assignments, flood, risk concentration, and more.

The meeting is scheduled for 8:30 a.m.–noon on May 5, 2005, at the Grand Hyatt in New York City.

The meeting is free of charge. However, space is limited, and you must register in advance. To register, visit [onlocation.iso.com](http://onlocation.iso.com) and follow the link for LOCATION® Regional Seminars.



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## Using ZIP Codes to assign PPC™?

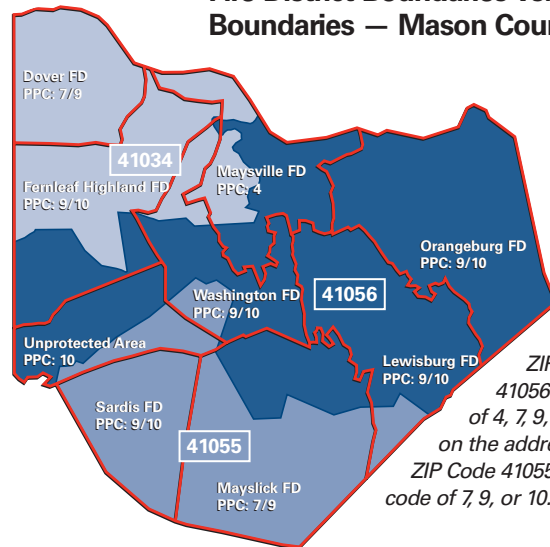
### *Not a good idea...*

Do you use ZIP Codes to assign PPC™? If so, you aren't always getting the right class. Fire districts often don't follow community, postal, or ZIP Code boundaries. Many cities have multiple fire districts within city limits, each with a different PPC code. Some states also have separate protection class rules for dwellings and commercial buildings. And many states require supplemental coding information based on fire district for premium-tax or reporting purposes. So what's the alternative?

You need to assign and maintain accurate PPC codes for every policy address. For the correct PPC every time, you need LOCATION® PPC. You can even use PPC Service to assign the correct PPC to addresses not yet published by the United States Postal Service.

"The LOCATION geographic information databases have more streets than the U.S. Postal Service and commercial mapping databases combined," says Bill Raichle, ISO's assistant vice president, Risk Decision Information. "With more than 55,000 geographic updates annually, you know you're getting the most accurate and up-to-date information available." 

## Fire District Boundaries vs. ZIP Code Boundaries — Mason County, Kentucky



Properties in ZIP Codes 41034 and 41056 could have a PPC of 4, 7, 9, or 10, depending on the address. A property in ZIP Code 41055 could have a PPC code of 7, 9, or 10.

For more information on LOCATION or to add others in your company to the OnLocation mailing list, contact ISO Customer Service at 1-800-888-4476. Or send e-mail to [location@iso.com](mailto:location@iso.com).



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